ON-FARM SOYBEAN TEST

Virginia On-Farm Soybean Test Plots 2007

A Summary of Research and Demonstration Plots Conducted by Virginia Cooperative Extension in Cooperation with Local Producers and Agribusiness

Conducted and summarized by:

Wes Alexander, Extension Agent, Southampton County
Keith Balderson, Extension Agent, Essex County
Glenn Chappell, Former Extension Agent, Prince George, County
Paul Davis, Extension Agent, New Kent/Charles City Counties
Cyndi Estienne, Extension Agent, Greensville County
Sam Johnson, Extension Agent, Westmoreland County
Matt Lewis, Extension Agent, Lancaster/Northumberland Counties
Watson Lawrence, Extension Agent, City of Chesapeake
David Moore, Extension Agent, Middlesex County
Mike Parrish, Extension Agent, Dinwiddie County
J. Scott Reiter, Extension Agent, Prince George County
Glenn Slade, Extension Agent, Surry County
Kelvin Wells, Extension Agent, Sussex County
David Holshouser, Extension Soybean Specialist, Virginia Tech

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Introduction

The demonstration and research plot results discussed are a cooperative effort of Virginia Cooperative Extension Agents and Specialists, area producers, and agribusiness. The purpose of this publication is to provide research-based information to aid in the decision-making process for grain producers in Virginia. It provides an unbiased evaluation of certain varieties, management practices, and new technology through on-farm replicated research using producer equipment and time. The plot work and analyzed results enable those producers to make management decisions based on research and provides them a greater opportunity to improve yields and profits, which can improve the quality of life for them and their families. The success of these on-farm plots is very dependent on the cooperative effort of the producer and the assisting agribusinesses. We are grateful for their cooperation. We hope that the information will be beneficial to you and your individual agribusiness operations.

This publication will be presented each year at the Virginia Grain and Soybean Conference and will be available at least 6 regional production meetings throughout Virginia. The information found inside can potentially reach over 400 Virginia soybean and grain producers and agribusinesses impacting over 250,000 acres of soybeans valued at approximately $50 million.

The field work and printing of this publication is supported by the Virginia Soybean Check-Off Funds. The cooperators graciously wish to acknowledge this support. Any producer or agribusiness professional wishing to receive a copy of this publication should contact their local Extension Agent who can request a copy from David Moore in Middlesex County at 804-758-4120 or **damoore3@vt.edu.**

This is the eleventh year of this multi-county cooperative effort and further work is planned for 2008.

The authors wish to thank the many producers who participated in this project. Appreciation is extended to seed, chemical, and fertilizer representatives who donated products and/or assisted with the field work. Special thanks Paige Hogge, for her valuable technical assistance in compiling the book.

General Summary:

A. **VARIETY SELECTION:** Soybean variety selection remains one of the most important components of successful a soybean production system. Soybean yields fluctuate with variety, location, and environment. One should not compare varieties of different maturity groups because weather conditions during pod and seed development is most responsible for whether those varieties yields well or poor. Some years, timing of rainfall favors Group 4s and other years, it favors Group 5s. Let the information contained here help you select varieties that do well in your management system. It is always good to spread your risks. When viewing the variety information, look for plots that are similar to your location and soil type. When looking at overall variety performance, remember that the more locations a variety is in, the more reliable the yield information. Use this information along with Virginia Soybean Variety Evaluation Tests 2007, Virginia Cooperative Extension publication 424-107 to help make variety selections for your operation.

B. **SOYBEAN POPULATION:** Seed costs continue to rise. Historically, seeding rate recommendations included an "insurance" factor to insure that final plant populations were high enough, even when stands were poor. However, recent research has revealed that full-season seeding rates may be lowered. Therefore, we continue to evaluate reduced seeding rates.

C. **FOLIAR FUNGICIDES:** Soybean fungicide trials have been of interest now for several years. With the onset of soybean rust, producers began experimenting with soybean fungicides. We have found that occasionally late season leaf diseases reduce yield. Past research has shown that fungicides keep the crop green longer and improve seed quality, but an increase in yield does not always occur. Weather conditions will also make a difference in outcome. This year, we found no benefit of using foliar fungicides in three trials.

D. **SOYBEAN NEMATODE VARIETY COMPARISONS:** These tests evaluated soybean varieties with and without nematode resistance. These studies demonstrate the need for varieties adapted to Virginia that contain multi-species and multi-race resistance.

E. **SOYBEAN NEMATICIDE TESTS:** New seed treatment technology has shown control of nematodes in cotton. We tested two experimental seed treatments and Temik in-furrow nematicide in fields with known nematode infestations. We also tested these seed treatments in a field without nematodes to determine other value beside nematode control. Finally, Temik was evaluated under high-yielding irrigated conditions.

F. **2007 VIRGINIA NEMATODE SURVEY.** With the financial assistance of your check-off dollars, soils were sampled in historically poor-growth fields or in fields suspected of having nematode problems.

Soybean Variety Plots

2007 Overall Soybean Variety Comparison

Maturity Group IV

Brand/ Variety	*Charles City*	*Lanc/ Northum*	*Middle-sex*	*Prince George*	*Westmore-land*	*Avg.*	*Avg. Rel. Yield*
Vigoro V49N6RR*	51.5	36.2	55.3	41.8	53.0	47.6	110
NK S43-B1*		30.2		43.0	48.8	40.7	110
Pioneer 94M80*	62.8	31.4	60.1	36.1	47.7	47.6	107
S. States RT4760N*	60.7	30.8	48.4	38.5	54.5	46.6	106
Hubner H454NRR*	50.6	31.6		43.3	47.6	43.3	106
NK S49-Q9*		30.9		28.6	59.7	39.7	103
D&PL DP4919RR/S*	61.0	28.6	50.3	29.6	61.2	46.1	103
Hubner H484NRR*	54.5	31.1	53.0	32.5	55.6	45.3	102
Asgrow AG4801*	58.1	31.7	52.1	29.4	47.9	43.8	99
Vigoro V44N6RR*	61.4	28.2	53.5	29.8	48.4	44.3	99
USG 74A27*	59.9	33.6	53.0	25.7	47.7	44.0	99
Asgrow AG4903	64.7	29.8	40.6	29.1	55.2	43.9	98
T.A. Seed TS4389R	54.9	30.7	53.7	27.3	48.6	43.0	97
USG 7495NRS	50.2	31.7	53.0	29.8	47.2	42.4	96
Clark CL49NRR		29.8	45.0	30.1	52.1	39.3	95
D&PL DP4690RR	53.9	28.8	47.1	31.7	47.7	41.8	95
Pioneer 94B73	49.6	28.7	58.3	27.3	47.7	42.3	95
S. States RT4370N	47.9	31.7	48.4	31.0	48.1	41.4	95
T.A. Seed TS4599R	54.9	27.8	57.5	25.1	47.6	42.6	94
Campbell C444RR					49.0	49.0	97
Campbell C476RR					43.2	43.2	86
Average	56.0	30.7	51.8	32.1	50.4	43.7	100
LSD (0.10)						5.9**	11**

Maturity Group V									*Avg. Rel. Yield*
Brand/ Variety	***Charles City***	***Chesa-peak***	***Greens-ville***	***Middle-sex***	***New Kent***	***Prince George***	***South-ampton***	***Avg.***	
Asgrow AG5605*	59.5	40.1	25.8	63.2	60.4	34.5	46.3	47.1	111
USG Allen*	61.8	37.7	34.9	55.1	55.7	29.2	42.3	45.2	108
Vigoro V51N7RS*	56.7	41.9	31.4	53	54.9	30.3	41.2	44.2	105
Pioneer 95M82*	60.8	48.3	26.1	50.4	48	33.1		44.5	103
S.States RT5160N*	59.6	47.3	27.9	49.7	55.3		32.4	45.4	102
USG 7553nRS	55.4	39.1	27.7	53.6	59.5	25.1	37.5	42.6	100
Asgrow AG5905	55.5	38.1	28.6	47.8	55.2	29.6	38.2	41.9	99
Pioneer 95M50	55.8	40.7	27.2	48.7	55.6	24.7	42	42.1	99
Hubner H502NRR	61.5	44.5	20.7	50.4	38.9	35.5	41	41.8	99
Vigoro V53N7RR	61.9	38.4	23.9	51.3	56	27.5	35.4	42.1	98
D&PL DP5115RR	55.8		21.3	51.1	52.9	34.8	33.3	41.5	97
D&PL DP5634RR	64.5	37.6	28.6	48.6	50.3	32.4	26	41.1	97
S.States RT5471N	56.2	39.9	23.5	46.6	49.7		34.7	41.8	93
Hubner H546NRR	56.7		24.8	48.7	46.8	29.6	29.4	39.3	92
NK S52-U3				45	51.9	24		40.3	89
Average	58.7	41.1	26.6	50.9	52.7	30.0	36.9	42.4	99.5
LSD (0.10)								4.0**	9**

*Not significantly different from top-yielding variety

**LSD of yield and average relative yield is only valid for varieties tested in all locations.

Discussion:

The more locations a variety is in the more reliable the yield information is. Group 5 soybeans, this year, performed well for the most part because of the timely rains in early September that saved a lot of soybean crops. Group 5 out-yielded Group 4 soybeans in most locations. It is always a good idea to spread your risks with soybeans. We have been spoiled for several years with good summer weather and Group 4s have yielded well.

The top yielding maturity group 4 varieties that were tested in all 6 locations were: Hubner H484NRR, Deltapine DP4919RR/S, Asgrow AG4703, Southern States RT4981, TA Seeds TS4599R, Vigoro V49N6RR, Delta King DK4866RR, NK S40-R9, Vigoro V44N6RR, and TA Seeds TS4389, and NK S43-B1. There was no significant difference between the yields of these varieties.

The top yielding maturity group 5 varieties that were tested in all 5 locations were: Pioneer 95M82, Asgrow 5905, Asgrow 5605, USG 7553nRS, and Delta King 5066. There was no significant difference between the yields of these varieties.

Relative Yield:

Past analysis of data has shown that more test locations result in more reliable information. It is better to choose a variety by averaging yields over all test locations than by choosing a variety that yielded well only in a test close to where you farm. But, average yields should not be used unless all varieties are tested in all locations because data will be skewed to those varieties that are tested in the highest yielding locations. If varieties were not tested in all locations, relative yield is a better method of comparing varieties. Relative yield is calculated by dividing the yield of a variety by the average yield of all varieties at that location. A variety with a relative yield of 105 was 5% above the average of all varieties at that location. Relative yield is not an actual yield, but a value that is relative to all other yield values at that location.

Thanks to all the cooperators and supporters. Use these data, official soybean variety tests, and other Virginia Tech variety information when making planting decisions for 2007.

2007 CHARLES CITY REPLICATED GROUP 4 SOYBEAN VARIETY COMPARISONS

Cooperators: Producer: Renwood Farms, David & John Hula
Extension: Paul Davis, New Kent/Charles City; David Holshouser, TAREC
Agribusiness: FFR, Phil Egolf & Phil Troutman
Previous Crop: Corn-2006
Soil Type: Pamunkey Fine Sandy Loam
Tillage: No-Till
Test/Plot Size: 3.75' X 16'; 3 reps
Planting Equipment: Hege Plot Planter
Planting Date: May 25, 2007
Row Spacing: 15 inches
Variety: Vigoro V44N6RR
Crop Protection: Herbicides: glyphosate + Dual Magnum II & glyphosate Post
Harvest Date: November 21, 2007

Brand	Variety	Moisture	Yield
		(%)	(bu/A)
Asgrow	AG4903	13.7	64.7
Pioneer	94M40	14.0	62.8
Vigoro	V44N6RR	12.9	61.4
D&PL	DP4919RR/S	13.5	61.0
S. States	RT4760N	13.6	60.7
USG	74A27	13.5	59.9
Asgrow	AG4801	13.6	58.1
T.A. Seed	TS4599R	13.8	54.9
T.A. Seed	TS4389R	13.4	54.9
Hubner	H484NRR	13.5	54.5
D&PL	DP4690RR	13.6	53.9
Vigoro	V49N6RR	13.5	51.5
Hubner	H454NRR	13.4	50.6
USG	7495Nrs	13.3	50.2
Pioneer	94B73	13.6	49.6
S. States	RT4370RR	13.6	47.9
LSD (0.10)		0.8	10.6

Discussion: Yields were excellent at this irrigated site. Use this with other variety information to select high-yielding varieties in 2008.

2007 LANCASTER/NORTHUMBERLAND GROUP 4 SOYBEAN VARIETY COMPARISONS

Cooperators: Producer: Craig, Dan and David Brann
Extension: Matt Lewis, Northumberland/Lancaster; Spencer Moody, Intern
Agribusiness: Participating Seed Companies
Previous Crop: Wheat-2006/07
Soil Type: Sassafras Fine Sandy Loam
Fertility: 20-80-80 to wheat crop (Ammonium Sulfate)
Tillage: No-Till
Planting Equipment: Great Plains 15 ft. no-till drill
Planting Date: June 26, 2007
Row Spacing: 7.5 inches
Crop Protection: 28 ounces Roundup Weather Max, 2 ounces warrior
Harvest Date: November 2, 2007
Harvest Equipment: John Deere 7720

Brand	Variety	Moisture	Yield	Adj. Yield[1]
		(%)	(bu/A)	(bu/A)
Check	S49-Q9	12.8	32	29.8
NK	S49-Q9	12.9	33	30.9
NK	S43-B1	12.8	32	30.2
D&PL	DP4919RR/S	Low	30	28.6
Check	S49-Q9	12.9	31	29.8
D&PL	DP4690RR	12.7	30	28.8
T.A. Seed	TS4389R	12.3	32	30.7
T.A. Seed	TS4599RS	12.4	29	27.8
Check	S49-Q9	Low	31	29.8
USG	74A27	12.9	35	33.6
USG	7495NRS	12.8	33	31.7
Asgrow	AG4903	Low	31	29.8
Check	S49-Q9	13.0	31	29.8
Asgrow	AG4801	12.7	32	31.7
Pioneer	P94B73	12.5	28	28.7
S. States	RT4760N	Low	29	30.8
Check	S49-Q9	12.5	27	29.8
S. States	RT4370N	12.4	29	31.7
Pioneer	P94M80	12.2	29	31.4
Hubner	H484NRR	11.8	29	31.1
Check	S49-Q9	11.8	28	29.8
Hubner	H454NRR	12.3	30	31.6
Vigoro	V44N6RR	Low	27	28.2
Vigoro	V49N6RR	12.2	35	36.2
Check	S49-Q9	12.1	29	29.8
Clark	CL49NRR	Low	29	29.8

[1]Yield was adjusted by linear interpolation using the checks on either side of the plot.

Discussion: This plot was planted in an area hit notably hard by the drought. Yields were surprisingly high given the lack of rainfall. The plot was planted using a 15' no-till drill. There was a large range of seed sizes in this plot, though there was no statistical relationship between seed size and yield. Compare this with other university yield data when selecting new soybean varieties to plant in 2008.

2007 PRINCE GEORGE/DINWIDDIE/SUSSEX GROUP 4 DOUBLE CROP SOYBEAN VARIETY COMPARISONS

Cooperators: Producer: Paul Cerny, Jr.
Extension: Scott Reiter, Mike Parrish, Kelvin Wells, Glenn Chappell
Agribusiness: Participating Seed Companies
Previous Crop(s): Corn-2006; wheat-2006/07
Soil Type: Aycock silt loam/Slagle sandy loam
Fertility: 600 lbs 5-10-20 + Liquid N to wheat
Tillage: No-till
Plot Size: 24 feet x 300 feet
Planting Equipment: Great Plains 1205NT drill
Planting Date: June 22, 2007
Row Spacing: 15 inch
Seeding Rate: 180,000
Crop Protection: Roundup 1 quart/acre; Warrior 3 oz/A (2 applications in August)
Harvest Date: November 5, 2007
Harvest Equipment: John Deere 6620 – 13 ft head

Brand	Variety	Moisture	Yield	Adj. Yield
		(%)	(bu/A)	(bu/A)
Check	S49-Q9	12.5	26.2	28.6
NK	S43-B1	12.2	39.8	43.0
Hubner	H484NRR	12.2	30.3	32.5
Hubner	H454NRR	12.2	40.8	43.3
Asgrow	AG4903	12.5	27.7	29.1
Asgrow	AG4801	12.5	28.2	29.4
S. States	RT4760N	12.3	37.3	38.5
S. States	RT4370N	12.5	30.3	31.0
Vigoro	V49N6RR	12.2	41.3	41.8
Vigoro	V44N6RR	12.0	29.7	29.8
Pioneer	94M80	12.5	36.3	36.1
Pioneer	94B73	12.6	27.7	27.3
T.A. Seed	TS4599R	12.7	25.7	25.1
T.A. Seed	TS4389R	12.8	28.2	27.3
Clark	CL49NRR	12.3	31.3	30.1
D&PL	DP4690RR	12.1	33.3	31.7
D&PL	DP4919RR/S	12.2	31.3	29.6
USG	7495nRS	12.6	31.8	29.8
USG	74A27	12.8	27.7	25.7
Check	S49-Q9	12.3	30.8	28.6

[1]Yield was adjusted by linear interpolation using the checks on either side of the plot.

Discussion: An August rainfall helped yields. No shattering was observed while walking through the plots on harvest day. Seed quality looked good with very little damage or seed stain. The 94M80 plot was missing 1 row through the entire plot due to planter problems.

2007 WESTMORELAND GROUP 4 SOYBEAN VARIETY COMPARISONS

Cooperators: Producer: F.F. Chandler, Jr.
Extension: Sam Johnson, Westmoreland; Caroline Salisbury, Intern
Agribusiness: Rusty Green, Curtis Packett, CPS; Seed Companies
Previous Crop: Corn
Soil Type: Kempsville sandy loam
Fertility: 0-50-60
Tillage: No-Till
Planting Equipment: IH 955 Cyclo (Air)
Planting Date: May 29, 2007
Row Spacing: 30 inches
Crop Protection: Glyphosate burndown, glyphosate Post
Harvest Date: October 12, 2007
Harvest Equipment: John Deere 9600

Brand	Variety	Moisture	Test Weight	Yield @ 13%	Adjusted Yield
		(%)		(bu/A)	(bu/A)
Check	94B73	11.1	56	51.3	47.7
Asgrow	AG4801	11.1	56	51.3	47.9
Campbell	C444RR	10.9	57	52.3	49.0
D&PL	DP4690RR	10.7	56	50.7	47.7
Hubner	H454NRR	10.9	56	50.4	47.6
NK	S43-B1	10.8	56	56.1	53.2
Pioneer	94B73	10.9	56	50.1	47.7
S. States	RT4370N	11.0	55	51.5	48.1
T.A. Seed	TS4389R	11.0	56	52.9	48.6
USG	74A27	11.1	56	52.9	47.7
Vigoro	V44N6RR	10.9	57	54.6	48.4
Check	P94B73	10.9	56	54.7	47.7
The varieties listed below were planted in a nearby field due to space constraints.					
Campbell	476 RR	13.6	55	44.4	43.2
NK	S43-B1	13.6	55	45.5	44.3
Vigoro	V49N6RR	13.4	56	54.5	53.0
USG	7495nRS	12.9	56	48.5	47.2
Check	94M80	13.2	56	49.0	47.7
Clark	CL49RR	13.3	56	50.9	52.1
Asgrow	AG4903	13.2	56	51.2	55.2
Hubner	H484RR	13.2	55	48.8	55.6
D&PL	DP4919	13.2	56	50.7	61.2
Check	94M80	13.1	55	37.1	47.7
NK	S49-Q9	13.0	55	48.7	59.7
T.A. Seed	TS4599R	13.2	55	40.6	47.6
S. States	RT4760N	13.5	55	48.5	54.5
Check	P94M80	13.1	56	44.2	47.7

[1]Yield was adjusted by linear interpolation using the checks on either side of the plot.

Discussion: Please look at the regional summary to see how these varieties performed across many fields and locations. Considering the drought and minimal amount of moisture these beans had during the growing season, these are very good yields and a group of soybeans which can handle some stress.

2007 MIDDLE PENINSULA GROUP 4 SOYBEAN VARIETY COMPARISONS

Cooperators: Producer: Ronnie Russell
Extension: David Moore, Middlesex; Keith Balderson, Essex; John Townsend, Spencer Moody-Summer Interns
Agribusiness: Ginny Barnes, Glenn Rountree, Andy Kume-Pioneer Hi-Bred; Participating Seed Companies
Previous Crop: Wheat
Soil Type: Eunola Loam
Fertility: None
Tillage: No-till
Plot Size: 10 ft. X 250 ft.
Planting Equipment: John Deere 720 Drill
Planting Date: June 28, 2007
Row Spacing: 7 inch rows
Seeding Rate: 200,000 seed per acre
Crop Protection: 1 qt of Glyphosate July 23; 2.5 oz. Warrior for CEW
Harvest Date: November 5, 2007
Harvest Equipment: John Deere 9400 – 20 ft header

Brand	Variety	Moisture	Yield
		(%)	(bu/A)
Asgrow	AG4801	10.8	52.1
Asgrow	AG4903	11.0	40.6
D&PL	DP4919RR/S	11.1	50.3
D&PL	DP4690RR	11.0	47.1
Clark	CL49RR	10.9	45.0
Hubner	H484NRR	11.0	53.0
Pioneer	94B73	10.9	58.3
Pioneer	94M80	10.9	60.1
S. States	RT4370N	10.9	48.4
S. States	RT4760N	10.9	48.4
T.A. Seed	TS4389R	11.0	53.7
T.A. Seed	TS4599R	10.9	57.5
USG	7495nRS	11.0	53.0
USG	74A27	10.9	53.0
Vigoro	V44N6RR	11.1	53.5
Vigoro	V49N6RR	10.9	55.3

Discussion: We had to wait for the field to be irrigated before we could plant. 1 inch of irrigation was applied on June 26th prior to planting on June 28th. We had good showers in August that helped this plot tremendously. The plot received 2.5 inches of irrigation water in September. We went from August 26 to October 24 with only 7/10 inch of rainfall. Great yields considering the year! Please use this and other Virginia Tech soybean variety information when making planting decisions for 2008.

2007 CHARLES CITY REPLICATED GROUP 5 SOYBEAN VARIETY COMPARISONS

Cooperators: Producer: Renwood Farms, David & John Hula
Extension: Paul Davis, New Kent/Charles City; David Holshouser, TAREC
Agribusiness: FFR, Phil Egolf & Phil Troutman
Previous Crop: Corn-2006
Soil Type: Pamunkey Fine Sandy Loam
Tillage: No-Till
Test/Plot Size: 3.75' X 16'; 3 reps
Planting Equipment: Hege Plot Planter
Planting Date: May 25, 2007
Row Spacing: 15 inches
Variety: Vigoro V44N6RR
Crop Protection: Herbicides: glyphosate + Dual Magnum II & glyphosate Post
Harvest Date: November 21, 2007

Brand	Variety	Moisture	Yield
		(%)	(bu/A)
D&PL	DP5634RR	14.4	64.5
Vigoro	V53N7RR	13.0	61.9
USG	Allen	14.1	61.8
Hubner	H502NRR	13.2	61.5
Pioneer	95M82	13.9	60.8
S.States	RT5160N	13.8	59.6
Asgrow	AG5605	12.8	59.5
Vigoro	V51N7RS	14.0	56.7
Hubner	H546NRR	13.0	56.7
S.States	RT5471N	13.6	56.2
D&PL	DP5115RR	14.0	55.8
Pioneer	95M50	13.5	55.8
Asgrow	AG5905	13.6	55.5
USG	7553nRS	13.9	55.4
LSD (0.10)		1.8	8.8

Discussion: Yields were excellent at this irrigated site. Use this with other variety information to select high-yielding varieties in 2008.

2007 CHESAPEAKE GROUP 5 SOYBEAN VARIETY COMPARISONS

Cooperators: Producer: Arnold and Jason Dawley
Extension: Watson Lawrence, VCE-Chesapeake
Agribusiness: Participating Seed Companies
Previous Crop: Corn-2006
Soil Type: Tetotum Loam
Fertility: 10-42-64
Tillage: Conventional till; Disk plus Disk & Cultipacker
Planting Equipment: Sunflower 9411 Drill
Planting Date: May 25, 2007
Row Spacing: 16 inches
Seeding Rate: 160,000 seed/acre
Crop Protection: Herbicides: 1 qt. Roundup, 3 oz First Rate
Insecticides: 2 oz. Warrior
Harvest Date: November 5, 2007
Harvest Equipment: Case IH 2166 with 20 ft. header

Brand	Variety	Moisture	TW	Yield
		(%)	lbs.	(bu/A)
Pioneer	95M82	14.1	58	48.3
Southern States	RT5160N	14.1	57	47.3
Hubner	H502RR	14.5	54	44.5
Vigoro	V51N7RS	12.6	56	41.9
Pioneer	95M50	12.6	56	40.7
Asgrow	AG5605	12.2	55	40.1
Southern States	RT5471N	14.0	57	39.9
USG	7553NRS	12.4	58	39.1
Vigoro	V53N7RR	12.5	56	38.4
Asgrow	AG5905	12.8	55	38.1
USG	Allen	12.9	56	37.7
D&PL	DP5634RR	12.5	55	37.6

Discussion: All varieties performed well given the limited amount of rain on this moderately well-drained soil. These and other officially tested varieties should be considered when selecting varieties for 2008.

2007 PRINCE GEORGE/DINWIDDIE/SUSSEX GROUP 5 DOUBLE CROP SOYBEAN VARIETY COMPARISONS

Cooperators: Producer: Paul Cerny, Jr.
Extension: Scott Reiter, Mike Parrish, Kelvin Wells, Glenn Chappell
Agribusiness: Participating Seed Companies
Previous Crop(s): Corn-2006; wheat-2006/07
Soil Type: Montross silt loam/Rains loam
Fertility: 600 lbs 5-10-20 + Liquid N to wheat
Tillage: No-till
Plot Size: 22 feet x 485 feet
Planting Equipment: Great Plains 1205NT drill
Planting Date: June 22, 2007
Row Spacing: 15 inch
Seeding Rate: 180,000
Crop Protection: Herbicides: Roundup 1 quart/acre
Insecticides: Warrior 3 oz/A (2 applications in August)
Treatment Info: See variety information below
Harvest Date: November 5, 2007
Harvest Equipment: John Deere 6620 – 13 ft head

Brand	Variety	Moisture	Yield
		(%)	(bu/A)
Check[1]	S49-Q9	12.1	25.4
Vigoro	V51N7RS	11..5	30.3
Vigoro	V53N7RR	11.5	27.5
Pioneer	95M50	11.3	24.7
Pioneer	95M82	11.6	33.1
D&PL	DP5115RR/S	11.6	34.8
D&PL	DP5634RR	10.9	32.4
USG	7553nRS	11.2	25.1
USG	Allen	11.2	29.2
Asgrow	AG5605	11.8	34.5
Asgrow	AG5905	11.5	29.6
Hubner	H502RR	11.7	35.5
Hubner	H546RR	11.3	29.6
NK	S52-U3	11.1	24.0
Check	S49-Q9	11.2	33.9

[1]Damaged with wheel traffic from 2 insecticide sprays for corn earworm.

Discussion: This plot received a rainfall in August that really helped yields. No shattering was observed while walking through the plots on harvest day. Seed quality looked good as well with very little damage or seed stain. The first check plot received considerable plant damage from sprayer traffic due to 2 worm sprays in August. Therefore, yields were not adjusted for the checks

2007 GREENSVILLE SOYBEAN GROUP 5 VARIETY COMPARISONS

Cooperators: Producer: Mike and Steve Allen
Extension: Cyndi Estienne, Greensville; Wes Alexander, Southampton
Agribusiness: Participating seed companies
Previous Crop(s): Cotton-2006; cotton-2005
Soil Type: Woodington fine sandy loam, Slagle fine sandy loam, Mattaponi sandy loam
Fertility: 250 lbs/acre 7-18-36 at planting
Tillage: Disked
Plot Size: 15 feet by 612 feet (average length)
Planting Equipment: John Deere 515 drill
Planting Date: June 1, 2007
Row Spacing: 15 inch
Seeding Rate: 50 lbs/acre
Crop Protection: Herbicides: Glypho Max
Insecticides: pyrethroid for corn earworm
Harvest Date: November 14, 2007
Harvest Equipment: 1620 Case with 15 ft head

Brand	Variety	Moisture	Yield	Adjusted Yield
		(%)	(bu/A)	(bu/A)
Check	AG5605	13.0	29.53	25.8
S.States	RT5160N	13.1	31.74	27.9
Hubner	H546RR	12.7	27.92	24.8
Hubner	H502RR	12.5	23.16	20.7
D&PL	DP5634RR	12.8	31.69	28.6
Check	AG5605	13.0	28.29	25.8
D&PL	DP5115RR/S	12.4	23.12	21.3
Pioneer	95M50	12.8	29.11	27.2
Pioneer	95M82	13.0	27.48	26.1
Asgrow	AG5905	13.2	29.69	28.6
Check	AG5605	13.1	26.39	25.8
USG	7553nRS	13.0	26.87	27.7
USG	Allen	13.0	31.95	34.9
Vigoro	V53N7RR	12.8	20.54	23.9
Vigoro	V51N7RS	12.7	25.27	31.4
S.States	RT5471N	13.1	17.64	23.5
Check	AG5605	13.2	17.94	25.8

[1]Yield was adjusted by linear interpolation using the checks on either side of the plot.

Discussion: Plot yields were measured with a weigh wagon. Moisture (Farmex multi-grain moisture tester) and test weight (Berckes grain test weight scale) were also determined. An exceptionally hot, dry summer negatively affected soybean yields in this variety trial, as well as throughout Greensville County. This one year, one location data can be utilized in concert with other Virginia Tech soybean variety information to help make variety selection decisions for the upcoming year.

2007 SOUTHAMPTON GROUP 5 SOYBEAN VARIETY COMPARISON

Cooperators: Producer: Peter Copeland
Extension: Wes Alexander, Southampton; Cyndi Estienne, Greensville
Agribusiness: Participating seed companies.
Previous Crop(s): Corn-2005; soybeans-2006
Soil Type: Altavista fine sandy loam
Fertility: 90 pounds K_20 per acre
Tillage: No-till
Plot Size: 24' x 1000' (average)
Planting Equipment: International 900, 4-row planter with rip shanks
Planting Date: May 15, 2007
Row Spacing: 36 inch
Seeding Rate: 45 pounds per acre
Crop Protection: Herbicides: Buccaneer 2x
Insecticides: Baythroid XL
Harvest Date: November 7, 2007
Harvest Equipment: John Deere 9500; Head 918

Brand	Variety	Moisture	Yield	Adjusted Yield
		(%)	(bu/A)	(bu/A)
Check	95M60	10.8	30.85	37.0
Pioneer	95M50	11.1	41.93	47.4
Hubner	H502NRR	11.1	38.42	41.0
Vigoro	V51N7RS	11.1	40.71	41.2
Asgrow	AG5605	11.2	48.16	46.3
USG	Allen	11.3	46.16	42.3
Check	95M60	11.2	42.39	37.0
Pioneer	95M50	11.2	45.94	41.5
D&PL	DP5115RR/S	10.9	35.64	33.3
S. States	RT5471N	11.1	35.79	34.7
Vigoro	V53N7RR	11.3	35.20	35.4
Check	95M60	11.1	35.48	37.0
Pioneer	95M50	11.2	37.76	39.1
Asgrow	AG5905	11.3	37.22	38.2
S. States	RT5160N	11.2	31.87	32.4
USG	7553nRS	11.1	37.26	37.5
Check	95M60	11.0	37.09	37.0
Pioneer	95M50	11.0	38.25	38.2
Hubner	H546NRR	10.9	29.40	29.4
D&PL	DP5634RR	11.0	26.05	26.0

[1]Yield was adjusted by linear interpolation using the checks on either side of the plot.

Discussion: 2007 was a year of extreme heat and drought throughout Southampton County and this test location suffered as well. Corn earworm infestation was controlled with a single application of Bathroid XL. A second application of Buccaneer was necessary to control a late pigweed emergence. Plots harvested were weighed using a weigh wagon calibrated by the known weight of weighing agent. Moisture was determined using a Farmex muti-grain moisture tester and test weight was determined using a Berckes potable grain scale. Use this and other Virginia Tech soybean variety information when making planting decisions for 2008.

2007 MIDDLE PENINSULA GROUP 5 SOYBEAN VARIETY COMPARISONS

Cooperators: Producer: Ronnie Russell
Extension: David Moore, Middlesex; Keith Balderson, Essex; John Townsend, Spencer Moody, -Summer Interns
Agribusiness: Ginny Barnes, Glen Rountree, Andy Kume-Pioneer Hi-Bred; Participating Seed Companies
Previous Crop: Wheat-2006/07
Soil Type: Eunola Loam
Fertility: None
Tillage: No-till
Plot Size: 10 ft. X 250 ft.
Planting Equipment: John Deere 720 Drill
Planting Date: June 28, 2007
Row Spacing: 7 inch rows
Seeding Rate: 200,000 seed per acre
Crop Protection: Herbicides: 1 qt glyphosate July 23
Insecticides: 2.5 ounces Warrior for CEW
Harvest Date: November 5, 2007
Harvest Equipment: John Deere 9400 – 20 ft. header

Brand	Variety	Moisture	Yield
		(%)	(bu/A)
Asgrow	AG5605	10.9	63.2
Asgrow	AG5905	10.9	47.8
D&PL	DP5115RR	10.9	51.1
D&PL	DP5634RR	10.8	48.6
Hubner	H502NRR	11.0	50.4
Hubner	H546NRR	11.2	48.7
NK	NK S52-U3	11.0	45.0
Pioneer	95M50	11.0	48.7
Pioneer	95M82	10.8	50.4
S.States	RT5160N	10.9	49.7
S.States	RT5471N	11.0	46.6
USG	Allen	11.1	55.1
USG	7553nRS	11.0	53.6
Vigoro	V51N7RS	11.0	53.0
Vigoro	V53N7RR	11.2	51.3

Discussion: We had to wait for the field to be irrigated before we could plant. 1 inch of irrigation was applied on June 26th prior to planting on June 28th. We had good showers in August that helped this plot tremendously. The plot received 2.5 inches of irrigation water in September. We went from August 26 to October 24 with only 7/10 inch of rainfall. Great yields considering the year! Please use this and other Virginia Tech soybean variety information when making planting decisions for 2008.

2007 NEW KENT GROUP 5 SOYBEAN VARIETY COMPARISONS

Cooperators: Producer: Robert Bland
Extension: Paul Davis, NK/CC, John Townsend-Intern
Contributor: Jim Wallace, Colonial SWCD
Agribusiness: Participating Seed Companies
Previous Crop: Corn-2006
Soil Type: Kempsville Fine Sandy Loam
Tillage: No-Till
Plot Size: 20 ft. X 800 ft.
Planting Equipment: Great Plains 10 ft. Drill
Planting Date: May 15, 2007
Row Spacing: 7 inches
Seeding Rate: 120,000 seed
Crop Protection: Glyphosate Burndown/Glyphosate Post
Harvest Date: November 8, 2007
Harvest Equipment: AGCO-R-52

Brand	Variety	Moisture	Yield	Adjusted Yield
		(%)	(bu/A)	(bu/A)
Pioneer	95M50	13.0	58.0	55.6
NK	NK S52-U3	13.8	53.8	51.9
Hubner	H546RR	13.2	48.3	46.8
S. States	RT5160N	13.2	56.7	55.3
Hubner	H502RR	13.7	39.7	38.9
USG	Allen	13.4	56.5	55.7
USG	7553nRS	13.1	60.0	59.5
S. States	RT5471N	13.1	49.8	49.7
D&PL	DP5115RR	13.1	52.7	52.9
D&PL	DP5634RR	13.0	49.9	50.3
Asgrow	AG5605	13.1	59.5	60.4
Asgrow	AG5905	13.5	54.1	55.2
Pioneer	95M82	12.5	46.8	48.0
Vigoro	V51N7RS	13.0	53.2	54.9
Vigoro	V53N7RR	13.1	53.9	56.0
Pioneer	95M50	13.1	53.2	55.6

[1]Yield was adjusted by linear interpolation using 95M50 on either side of the plot.

Discussion: Use this and other Virginia Tech Soybean Variety information when making planting decisions for 2008

2007 SOYBEAN SEEDING RATE STUDY

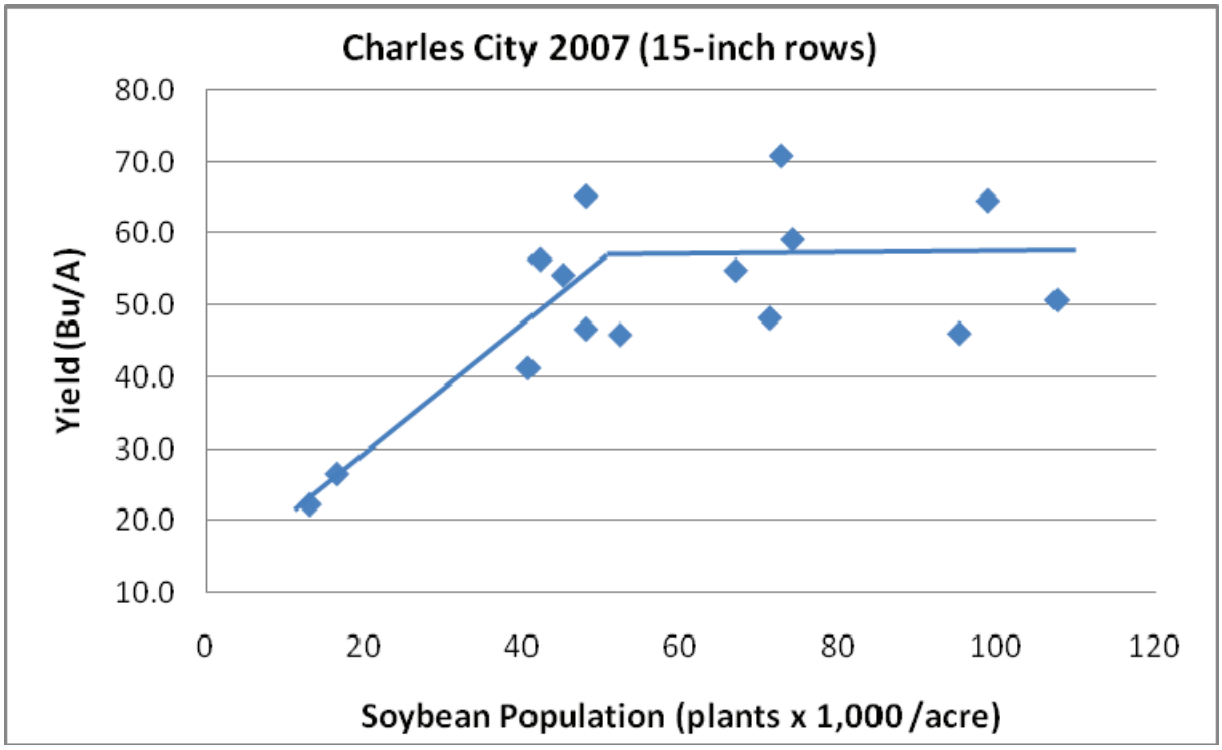
Cooperators: Producer: Robert Respess, Jr.
Extension: David Moore, Middlesex
Previous Crop: Corn 2006
Soil Type: Woodstown Fine Sandy Loam
Fertility: 2000# Ag Lime
Tillage: No-Till into Corn Stubble
Plot Size: 30 ft X 300 ft.
Planting Equipment: Great Plains 1500 No-Till Drill
Planting Date: May 31, 2007
Row Spacing: 7.5 inches
Seeding Rate: 140,000 vs. 180,000 seed per acre
Crop Protection: Herbicides: glyphosate burndown and postemergence
Harvest Date: October 31, 2007
Harvest Equipment: International Harvester 2166 -20 ft. header

Treatment	Rep	Moisture	Yield	Adj. Yield
		(%)	(bu/A)	(bu/A)
Standard (180,000)	1	15.3	43.5	
140,000	1	15.0	41.4	
Standard	2	14.9	39.3	
140,000	2	14.8	33.4	
Standard	3	14.7	35.7	
140,000	3	14.5	35.7	
Standard	4	14.9	40.8	
140,000	4	14.8	44.5	
Averages				
Standard		15.0	39.8	
140,000		14.8	38.8	
LSD (0.10)				

Discussion: 2007 was a drier than normal year. Yields here are not bad considering that. Yields did not differ significantly between the soybeans at population of 180,000 and population of 140,000. Decreasing populations by 40,000 can save a bag of seed every 4 acres or about $7.50 per acre. Use this and other replicated Virginia Tech Soybean production information when making planting decisions for 2008.

2007 CHARLES CITY SOYBEAN POPULATION STUDY

Cooperators: Producer: Renwood Farms, David & John Hula
Extension: Paul Davis, New Kent/Charles City; David Holshouser, TAREC
Agribusiness: FFR, Phil Egolf & Phil Troutman
Previous Crop: Corn-2006
Soil Type: Pamunkey Fine Sandy Loam
Tillage: No-Till
Test/Plot Size: 6 ft. X 25 ft.
Planting Equipment: Hege Plot Planter
Planting Date: May 25, 2007
Row Spacing: 15 inches
Variety: Vigoro V44N6RR
Crop Protection: Herbicides: glyphosate + Dual Magnum II & glyphosate Post
Harvest Date: November 21, 2007
Harvest Equipment: Wintersteiger Plot Combine



Discussion: Emergence was only 57%, so the plant population was lower expected. Although variable, stands of 50,000 to 100,000 plants per acre produced similar yields. This study again shows that on productive soils, we do not need high seeding rates when planting full season narrow row soybeans. Compare this population study with other plots in your area.

2007 CHARLES CITY FOLIAR FUNGICIDE COMPARISON

Cooperators: Producer: Renwood Farms, David & John Hula
Extension: Paul Davis, VCE- New Kent/Charles City
Agribusiness: FFR, Phil Egolf & Phil Troutman
Previous Crop: Corn-2006
Soil Type: Pamunkey Fine Sandy Loam
Tillage: No-Till
Test/Plot Size: 6 ft. X 25 ft.
Planting Equipment: Hege Plot Planter
Planting Date: May 25, 2007
Row Spacing: 15 inches
Seeding Rate: 120,000 seed/A
Crop Protection: Roundup + Dual Magnum II preplant; Glyphosate Post
Treatment Info: Applied 8-22-07 (R-4) with 8003 nozzle at 22 gal/A
Harvest Date: November 21, 2007
Harvest Equipment: Wintersteiger Plot Combine

Treatment	Rep 1	Rep 2	Rep 3	Rep 4	Avg. Yield
	(bu/A)	(bu/A)	(bu/A)	(bu/A)	(bu/A)
Control	62.8	63.6	35.0	58.9	55.1
Headline @ 6oz. Baythroid	39.9	67.8	51.4	63.1	55.6
Quadris @ 6.25 oz + Baythroid	56.2	47.2	45.6	41.4	47.6
Stratego @ 10 oz + Baythroid	56.8	52.3	52.6	47.1	52.2
Tilt @ 4 oz + Baythroid	57.1	47.4	51.9	46.3	50.7
Quilt @ 14 oz + Baythroid	54.5	61.7	58.8	64.3	59.8
Bravo @ 16 oz + Baythroid	44.2	51.3	70.5	59.5	56.4
Folicur @ 3 oz + Baythroid	53.4	53.2	57.3	35.4	49.8
Baythroid @ 2 oz only	60.8	52.9	56.9	47.6	54.6
Headline @ 6 oz only	47.1	67.7	69.6	48.7	58.3
Quadris @ 6.25 oz only	49.9	56.5	49.3	33.5	47.3
Control	59.9	44.3	54.6	52.9	52.9
LSD (0.10)					10.8

Discussion: Under excellent growing conditions, with irrigation, there was no yield advantage to using late season fungicides and/or insecticides on this full season Maturity Group 5 soybean plot. Compare this study with other foliar fungicide plots in your area.

2007 EVALUATION OF QUADRIS ON IRRIGATED SOYBEANS

Cooperators: Producer: John F. Davis and Tommy Hicks
Extension: Keith Balderson, VCE, Essex County
Previous Crop: Corn
Tillage: Continuous No-till
Plot Size: Approximately .4 acre
Planting Date: April 30, 2007
Row Spacing: 15 inches
Crop Protection: Insecticide: Temik in-furrow
Herbicide: glyphosate
Treatment Info. Quadris applied at 6.2 oz./acre on treated plots at R2-3 growth stage
Harvest Date: October 2, 2007
Harvest Equipment: John Deere 9660

Treatment	Rep	Moisture	Yield
		(%)	(bu/A)
Control	1	10.6	71.0
Quadris	1	10.8	73.6
Control	2	10.9	74.4
Quadris	2	10.6	75.5
Averages			
Control		10.8	72.7
Quadris		10.7	74.6
LSD (0.10)		1.6	4.7

Discussion:
There continues to be interest in fungicide applications to soybeans to increase yields. In this plot, the Quadris application tended to increase yields, but the difference was not statistically significant. With soybeans at $10 per bushel, a yield increase of about 1.5 bushels per acre would pay for the treatment.

2007 EVALUATION OF QUADRIS ON IRRIGATED DOUBLE CROP SOYBEANS

Cooperators: Producer: John F. Davis and Tommy Hicks
Extension: Keith Balderson, Essex
Previous Crop: Wheat
Plot Size: 1.01 acres
Variety: NK S39-A3
Tillage: Continuous No-till
Planting Date: June 19, 2007
Row Spacing: 15 inches
Crop Protection: Insecticide: Temik in-furrow
Herbicide: glyphosate
Treatment Info. Quadris applied at 6.2 oz./acre on treated plots at R2-3 growth stage
Harvest Date: October 15, 2007
Harvest Equipment: John Deere 9660

Treatment	Rep	Moisture	Yield
		(%)	(bu/A)
Control	1	10.5	54.2
Quadris	1	10.5	56.4
Control	2	10.5	52.4
Quadris	2	10.5	56.4
Averages			
Control		10.5	53.3
Quadris		10.5	56.4
LSD (0.10)		0.0	5.7

Discussion:
There continues to be interest in fungicide applications to soybeans to increase yields. In this experiment, Quadris tended to increase yields, but the yield increase was not significantly different from the control. With soybeans at $10 per bushel, a yield increase of about 1.5 bushels per acre would pay for the treatment.

2007 CHESAPEAKE NEMATODE VARIETY COMPAISON

Cooperators: Producer: Ed Ransome-Frank Williams Farm
Extension: Watson Lawrence, Chesapeake
Agribusiness: Ginny Barnes, Glenn Rountree –Pioneer Hi-Bred
Previous Crop: Soybean-2006
Soil Type: Tomotley Fine Sandy Loam
Fertility: 10-42-64
Tillage: No-Till
Planting Equipment: Sunflower 9411 Drill
Planting Date: May 15, 2007
Row Spacing: 24 inches
Seeding Rate: 160,000 seeds/acre
Crop Protection: Herbicides: 1 qt. Roundup, 3 oz. First Rate
Insecticides: 2 oz. Warrior
Harvest Date: October 18, 2007
Harvest Equipment: Case IH 2166 with 20 ft. header

Treatment	Rep	TW	Yield
		(lbs)	(bu/A)
Pioneer 95M50	1	57	29.5
Pioneer 95M60	1	58	37.1
Pioneer 95M50	2	58	32.8
Pioneer 95M60	2	59	35.9
Pioneer 95M50	3	57	22.9
Pioneer 95M60	3	58	37.4
Pioneer 95M50	4	57	23.7
Pioneer 95M60	4	58	39.5
Averages			
Pioneer 95M50		57	27.2
Pioneer 95M60		58	37.4
LSD (0.10)		0.1	7.0

Discussion: Pioneer 95M60 has resistance to soybean cyst nematode (SCN) races 1, 2, 3, 5, and 14 and to Southern Root Knot nematode. This replicated test was planted on a farm which previously tested positive for SCN race 4. A new nematode sample for this field has been submitted to VA Tech nematode lab for race typing, which will be completed sometime in early 2008. According to yield differences, the Pioneer 95M60 has some yield advantage which supports nematode resistance for yet to be determined cysts races found in the nematode sample.

2007 GLOUCESTER NEMATODE VARIETY COMPARISON

Cooperators: Producer: Clem & Keith Horsley
Extension: David Moore, Middlesex
Agribusiness: Ginny Barnes, Glenn Rountree-Pioneer Hi-Bred
Previous Crop(s): Corn-2006; Rye-2006/07
Soil Type: Kenansville Loamy Fine Sand
Fertility: 1 ton Lime
Tillage: No-Till
Test Size: 12 ft. X 235 ft.
Planting Equipment: Kinze 3000 Series Planter
Planting Date: June 25, 2007
Row Spacing: 15 inches
Seeding Rate: 150,000
Crop Protection: Herbicides: glyphosate burndown and postemergence
Insecticides: 2.5 oz. Warrior for CEW
Treatment Info: AG5605 has soybean cyst, but no southern root knot nematode resistance
95M50 has soybean cyst and southern root knot nematode resistance
95M82 has no soybean cyst or southern root knot nematode resistance
Harvest Date: December 5, 2007
Harvest Equipment: AGCO R-62

Treatment	Rep	Moisture	Yield
		(%)	(bu/A)
Pioneer 95M50	1	11.8	22.7
Asgrow 5605	1	13.3	22.3
Pioneer 95M60	1	12.6	22.5
Pioneer 95M50	2	13.1	23.3
Asgrow 5605	2	12.6	26.2
Pioneer 95M60	2	13.3	26.0
Pioneer 95M50	3	13.3	27.0
Asgrow 5605	3	12.9	26.2
Pioneer 95M60	3	13.2	31.7
Pioneer 95M50	4	13.4	29.7
Asgrow 5605	4	13.2	27.9
Pioneer 95M60	4	13.3	28.8
Averages			
Pioneer 95M50		12.9	25.7
Asgrow 5605		13.0	25.7
Pioneer 95M60		13.1	27.3
LSD (0.10)		0.8	2.7

Discussion: This test was conducted to compare root-knot nematode (RKN) resistance of Pioneer brand 95M50 with Asgrow AG5605, a variety with limited RKN resistance in a field with known RKN problems. Pioneer brand 95M60, a variety with soybean cyst nematode (SCN) and RKN resistance was included to see how it would compare. Drought conditions affected the final yields. Nematode samples were taken randomly over the entire plot on July 12, 2007 shortly after planting and again on August 31, 2007 (August results are below). July results showed some low number of SCN juveniles and no RKN. There are no significant differences in yields, but a slight advantage to Pioneer 95M60 with the broad spectrum cyst resistance package. It is interesting to note that in the Virginia's official variety tests, AG5605 yields approximately 10% higher than 95M50 under nematode-free conditions. This may indicate that nematodes are indeed lowering yield on that variety in this test. Therefore, it is very important to select varieties that match field needs.

Nematodes are silent thieves of soybean yield. With help from funds from the Virginia Soybean Board, Agents in Virginia are sampling for nematodes on fields that have expressed growth problems or where nematodes are suspected. If you suspect nematode problems, please call your Extension Agent to have those fields sampled.

NEMATODE ASSAY REPORT (August 31, 2007)

Species	*Number present in 500cc of soil*
Lesion	270
Root-Knot	3420
Stubby Root	200
Stunt	40
Spiral	680
Lance	30
Ring	180
Sheath	1140

2007 CYST NEMATODE VARIETY COMPAISON -IRRIGATED

Cooperators: Producer: Cloverfield Enterprises
Extension: Keith Balderson, Essex; David Holshouser, TAREC; Spencer Moody, Summer Intern
Agribusiness: Ginny Barnes and Glenn Rountree, Pioneer Hi-Bred
Previous Crop(s): Barley-2006-07; Corn 2006
Variety: Pioneer 95M50 vs. Pioneer 95M60
Soil Type: Molena loamy sand
Fertility: Residual phosphate and potash from previous barley crop
Tillage: Continuous no-till with turbo-till being used
Plot Size: Approximately .3 acre
Planting Equipment: John Deere air planter
Planting Date: June 15, 2007
Row Spacing: 15 inches
Seeding Rate: 180,000 plants per acre
Crop Protection: Herbicides: glyphosate at 1 qt/acre postemergence two times
Insecticides: generic Karate at 1.25 oz/acre for corn earworms
Harvest Date: November 14, 2007
Harvest Equipment: John Deere 9860 with 30 foot header

Treatment	Rep	Moisture	Yield
		(%)	(bu./A@ 13%)
Pioneer 95M50	1	11.9	10.5
Pioneer 95M60	1	12.2	37.4
Pioneer 95M50	2	11.9	14.4
Pioneer 95M60	2	12.0	36.2
Pioneer 95M50	3	12.2	19.8
Pioneer 95M60	3	11.9	37.3
Pioneer 95M50	4	11.7	20.9
Pioneer 95M60	4	11.8	31.4
Averages:			
Pioneer 95M50		11.9	16.4
Pioneer 95M60		12.0	35.6
LSD (0.10)		0.3	8.2

Discussion:
This experiment was planted in a field with a long history of high soybean cyst nematode (SCN) levels. A nematode assay conducted in early August revealed 1190 SCN juveniles and 110 cysts from the 95M50 plots and 1340 SCN juveniles and 180 cysts form the 95M60 plots in 500 cc of soil (about 1 pint.) A few years ago, the Nematode Assay Lab at Virginia Tech determined that SCN race 1 is present in the field. This plot was planted to illustrate the importance of knowing the SCN race within a field. Pioneer 95M50 is resistant to SCN race 3, while Pioneer 95M60 is

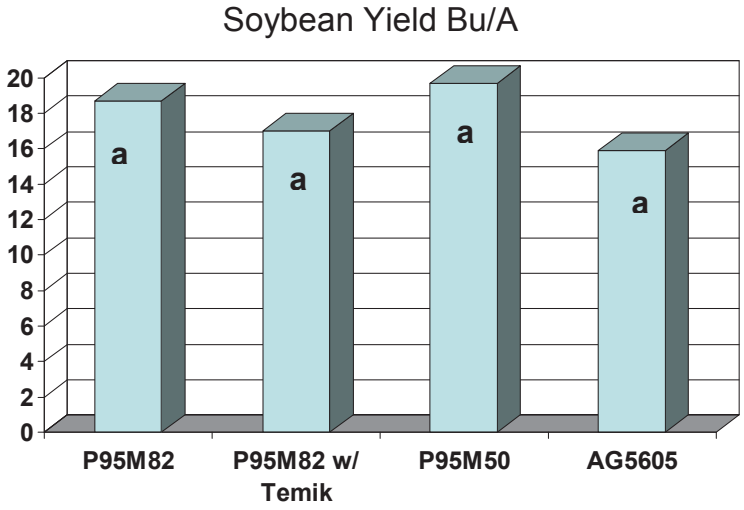
resistant to both race 1 and 3. Pioneer 95M60 performed well in this field, while Pioneer 95M50 was severely stunted by the nematodes. See the attached picture taken in July. We hoped for higher yields from the 95M60, and we think that lodging and a lack of a late irrigation due to salt concerns hurt the yield. A planting population of 140,000 may have been better. Also, please note that Pioneer recommends this variety only where SCN resistance to races other than race 3 or 14 is needed. The cooperating farmer also noted that the 95M60 was more difficult to harvest than most soybean varieties.

2007 SOUTHAMPTON NEMATODE CONTROL TEST

Cooperators: Producer: Eddie Partridge
Extension: Wes Alexander, Southampton; Cyndi Estienne, Greensville
Agribusiness: Ginny Barnes, Pioneer Hi-Bred
Previous Crop(s): Soybeans-2005; cotton-2006
Soil Type: Emporia fine sandy loam, Uchee loamy sand
Fertility: 300 lb. 5-10-30 at planting
Tillage: Disk, Ripped, Bedded, eight rows KMC
Plot Size: 24' x 900'
Planting Equipment: JD MaxEmerge 8-row planter
Planting Date: May 21, 2007
Row Spacing: 36 inch
Seeding Rate: 35 pounds per acre
Crop Protection: Herbicides: Buccaneer
Treatment Info: Temik applied in-furrow at 5.0 lb/A at planting
AG5605 has soybean cyst, but no southern root knot nematode resistance
95M50 has soybean cyst and southern root knot nematode resistance
95M82 has no soybean cyst or southern root knot nematode resistance
Seed Quality was rated as 1 = very good and 5 = very poor
Harvest Date: November 1, 2007
Harvest Equipment: JD 4425, 213 Head

Treatment	Rep	Moisture	Yield	Test Wt.	Seed Quality
		(%)	(bu/A)	(lb/bu)	(1-5)
95M82	1	15.6	19.4	54	4
95M82+Temik	1	15.8	20.1	55	4
95M50	1	15.8	28.4	54	5
AG5605	1	15.6	13.6	55	4
95M82	2	15.3	15.6	55	4
95M82+Temik	2	15.3	13.4	55	4
95M50	2	15.1	11.1	55	4
AG5605	2	14.7	12.8	56	4
95M82	3	14.2	19.4	57	4
95M82+Temik	3	14.6	14.4	56	4
95M50	3	14.5	17.5	57	5
AG5605	3	13.9	16.7	57	4
95M82	4	13.9	20.5	57	4
95M82+Temik	4	14.1	20.4	57	4
95M50	4	14.1	21.6	56	4
AG5605	4	14.0	20.4	57	4

Treatment	Rep	Moisture	Yield	Test Wt.	Seed Quality
		(%)	(bu/A)	(lb/bu)	(1-5)
Averages					
95M82		14.8	18.7	55.8	4.0
95M82+Temik		15.0	17.0	55.8	4.0
95M50		14.9	19.7	55.5	4.5
AG5605		14.6	15.9	56.3	4.0
LSD (0.10)		0.2	4.4	0.6	0.4



Alexander, W.C., Estienne, C. E., Holshouser, D.

Discussion: Southern root-knot nematodes (RKN) have proven to lower yields in soybeans grown in sandy soils of southeast Virginia. This test was to determine the yield benefits by applying a nematicide, planting a soybean variety tolerant to RKN, and planting a soybean variety without resistance to RKN. Soybeans were harvested on November 1, 2007 and weighed using a weigh wagon calibrated by the known weight of weighing agent. Moisture was determined using a Farmex multi-grain moisture tester and test weight was determined using a Berckes portable grain scale. There was no significant difference in yield between varieties. Seed quality was determined at Tidewater AREC.

In late August, each of the four treatments in Replication 2 was sampled for nematodes and analyzed by Virginia Tech's Nematode Laboratory. This field was infested with more than one species of nematode as revealed in the nematode diagnostic assay report on the following page. Of nematodes present, RKN is classified at a moderate risk, but stubby root and stunt seem to be a bigger problem. The levels of stubby root and stunt are classified as a moderate and high risk, respectively. As shown by the assay, Temik provided some control of these species; but the numbers remaining are still a moderate risk.

Nematode Diagnostic Assay Report				
Nematodes present in 500cc of soil: All samples taken in Rep 2 on August 28, 2007				
Nematodes	**Pioneer 95M82**	**Pioneer 95M82 + Temik**	**Pioneer 95M50**	**AG5605**
Pratylenchus (Lesion)	40	40	70	100
Meloidogyne (Root Knot)	90	90	20	20
Trichodorus (Stubby Root)	270	120	390	500
Tylenchorhynchus (Stunt)	1110	370	1890	1010
Mesocriconema (Ring)	0	10	10	10

2007 CHEASAPEAKE NEMATICIDE TESTS

Cooperators: Producers: Frank Williams & Ed Ransom
Extension: David Holshouser, TAREC; Watson Lawrence, Chesapeake;
Agribusiness: Jim Oliver, Monsanto; Chip Graham, Bayer CropScience;
Ken Teeter, Syngenta Crop Protection
Previous Crop(s): Soybean-2006
Soil Type: Tomotley fine sandy loam
Fertility: 10-42-64
Tillage: No-Till
Plot Size: 16' x 3.75'
Planting Equipment: Hege plot planter
Planting Date: May 15, 2007
Row Spacing: 15 inches
Seeding Rate: 160,000 seeds/acre
Crop Protection: Herbicides: Roundup at 1qt/A + FirstRate at 3 oz/A
Insecticide: Warrior at 2 oz/A
Treatment Info: Asgrow AG4801: resistant to soybean cyst nematode, race 3
Asgrow AG4903: no nematode resistance
Temik® 15G applied at 4.5 oz/1000 foot row
Aeris® (imidacloprid + thiodicarb) applied as seed treatment
Avicta™ (abamectin) applied as seed treatment
Harvest Date: Nov. 5, 2007
Harvest Equipment: Wintersteiger Plot Combine

Variety	Nematicide	Rep	Moisture	Yield
			(%)	(bu/A)
AG4801	Control	1	11	36.0
	Aeris	1	10.8	36.2
	Avicta	1	10.9	41.5
	Temik	1	11	37.4
	Control	2	10.5	29.8
	Aeris	2	10.5	29.0
	Avicta	2	10.1	25.6
	Temik	2	10.7	34.3
	Control	3	10.8	31.3
	Aeris	3	10.7	30.6
	Avicta	3	10.5	30.9
	Temik	3	10.8	40.9
	Control	4	10.7	38.4
	Aeris	4	10.3	33.4
	Avicta	4	10.5	41.5
	Temik	4	10.4	35.8

Variety	Nematicide	Rep	Moisture	Yield
			(%)	(bu/A)
AG4903	Control	1	10.2	32.8
	Aeris	1	10.3	40.4
	Avicta	1	10	31.0
	Temik	1	10.3	56.8
	Control	2	10.6	35.7
	Aeris	2	10.6	41.4
	Avicta	2	10.1	32.6
	Temik	2	10.5	43.3
	Control	3	10.1	30.3
	Aeris	3	10.1	37.0
	Avicta	3	9.8	32.7
	Temik	3	9.9	33.8
	Control	4	10.1	37.0
	Aeris	4	10.5	37.6
	Avicta	4	10.2	41.8
	Temik	4	10.7	49.9
Averages				
AG4801	Control		10.8	33.9
	Aeris		10.6	32.3
	Avicta		10.5	34.9
	Temik		10.8	37.1
AG4903	Control		10.3	34.0
	Aeris		10.4	39.1
	Avicta		10.0	34.5
	Temik		10.4	46.0
AG4801			10.6 a	34.5 a
AG4903			10.3 b	38.4 a
	Control		10.5 a	33.9 b
	Aeris		10.5 a	35.7 b
	Avicta		10.3 b	34.7 b
	Temik		10.5 a	41.5 a

Discussion: This field was suspected of having soybean cyst nematodes (SCN) since a neighboring field previously tested positive for SCN race 4. There was no yield difference between the SCN race 3-resistant variety AG4801 and the susceptible variety AG4903. AG4801 does not usually yield as high as AG4903 under nematode-free conditions. Temik-treated plots yielded higher than seed treatments and the control, indicating a pest problem. A nematode sample was not taken from this area of the field, so we cannot be sure that this response was due to nematodes.

2007 ESSEX NEMATICIDE TEST

Cooperators: Producers: Cloverfield Enterprises, Essex
Extension: David Holshouser, TAREC; Keith Balderson, Essex
Agribusiness: Jim Oliver, Monsanto; Chip Graham, Bayer CropScience; Ken Teeter, Syngenta Crop Protection
Previous Crop(s): Essex: Corn-2006; Barley-2006/07
Soil Type: Molena loamy sand
Fertility: Residual from previous barley crop
Tillage: No-till
Plot Size: 17' x 3.75'
Planting Equipment: Hege plot planter
Planting Date: June 20, 2007
Row Spacing: 15 inches
Seeding Rate: 200,000 seed/acre
Crop Protection: Herbicides: glyphosate at 1 qt/acre twice
Insecticides: Karate at 1.25 oz/acre
Treatment Info: Asgrow AG4801: resistant to soybean cyst nematode, race 3
Asgrow AG4903: no nematode resistance
Temik® 15G applied at 4.5 oz/1000 foot row
Aeris® (imidacloprid + thiodicarb) applied as seed treatment
Avicta™ (abamectin) applied as seed treatment
Harvest Date: Nov. 6, 2007
Harvest Equipment: Wintersteiger plot combine

Variety	Nematicide	Rep	Growth Reduction	Chlorosis	Moisture	Yield
			(%)	(%)	(%)	(bu/A)
AG4801	Control	1	20	45	14.4	1.5
	Aeris	1	45	35	14.4	2.0
	Avicta	1	30	30	15.1	2.5
	Temik	1	10	10	14.4	5.7
	Control	2	50	50	14.3	1.5
	Aeris	2	20	65	14.3	1.8
	Avicta	2	10	30	14.2	2.9
	Temik	2	0	0	13.0	13.3
	Control	3	25	60	14.5	3.6
	Aeris	3	40	60	14.5	1.7
	Avicta	3	35	60	14.2	3.2
	Temik	3	15	30	14.4	10.4
	Control	4	15	50	14.2	3.9
	Aeris	4	45	60	14.3	2.6
	Avicta	4	20	40	14.2	2.8
	Temik	4	10	20	14.3	5.2

Variety	Nematicide	Rep	Growth Reduction	Chlorosis	Moisture	Yield
			(%)	(%)	(%)	(bu/A)
AG4903	Control	1	60	60	14.3	1.2
	Aeris	1	50	20	14.3	3.1
	Avicta	1	70	40	14.3	1.6
	Temik	1	30	10	14.3	5.4
	Control	2	70	65	14.5	1.2
	Aeris	2	80	85	14.5	1.2
	Avicta	2	50	70	14.3	1.2
	Temik	2	15	25	14.5	3.9
	Control	3	70	70	14.2	1.2
	Aeris	3	85	80	14.3	1.2
	Avicta	3	60	60	14.3	1.2
	Temik	3	50	40	14.3	3.5
	Control	4	85	85	14.5	1.4
	Aeris	4	80	80	14.4	1.2
	Avicta	4	50	35	14.7	4.0
	Temik	4	35	40	14.4	1.2
Averages						
AG4801	Control		28	51	14.4	2.6 bc
	Aeris		38	55	14.4	2.0 bc
	Avicta		24	40	14.5	2.9 bc
	Temik		9	15	14.4	8.7 a
AG4903	Control		71	70	14.4	1.3 c
	Aeris		74	66	14.4	1.7 bc
	Avicta		58	51	14.4	2.0 bc
	Temik		33	29	14.4	3.5 b
AG4801			24 b	40 b	14.3	4.0
AG4903			59 a	54 a	14.4	2.1
	Control		49 ab	61 a	14.4	1.9
	Aeris		56 a	61 a	14.4	1.9
	Avicta		41 b	46 b	14.5	2.4
	Temik		21 c	22 c	14.2	6.1

Discussion: High levels of soybean cyst nematode (SCN) races 1 and 3 were present in this field. Since neither variety has resistance to SCN race 1, yield was very low. AG4801, with SCN race 3 resistance did yield twice as high as AG4903; however, race 3 resistance is irrelevant in this situation. None of the seed treatments were effective. Temik increased yield, but was clearly not adequate to prevent a yield loss. This test demonstrates the need for soybean varieties adapted to Virginia multiple SCN race resistance.

Plots are located in a field infested with soybean cyst nematode, races 1 and 3. Photo was taken in August. Height of plot is only half of surrounding Pioneer brand 95M60 soybean which contains multiple-race SCN resistance. Plot on the left forefront is AG4801 (control); plot on right is AG4801 with Temik. AG4801 is resistant to only race 3 SCN. Yellow plots behind these plots are AG4903 with no SCN resistance.

2007 CHARLES CITY SEED TREATMENT COMPARISON

Cooperators: Producer: Renwood Farms, David & John Hula
Extension: Paul Davis, VCE- New Kent/Charles City
Agribusiness: FFR, Phil Egolf & Phil Troutman
Previous Crop: Corn-2006
Soil Type: Pamunkey Fine Sandy Loam
Tillage: No-Till
Test/Plot Size: 6 ft. X 25 ft.
Planting Equipment: Hege Plot Planter
Planting Date: May 25, 2007
Row Spacing: 15 inches
Seeding Rate: 120,000 seed/A
Crop Protection: Roundup + Dual Magnum II preplant; Glyphosate Post
Treatment Info: Cruiser Max Beans (thiamethoxam + mefenoxam + fludioxonil)
Apron Maxx RTA (mefenoxam + fludioxonil)
Aeris® (imidacloprid + thiodicarb)
Avicta™ (abamectin)
Harvest Date: November 21, 2007
Harvest Equipment: Wintersteiger Plot Combine

Brand	Variety	Seed Treatment	Moisture	Yield
			(bu/A)	(bu/A)
NK	S43B1	Cruiser Maxx Beans	12.7	44.7
NK	S43B1	Cruiser Maxx Beans	13.2	49.1
NK	S43B1	Cruiser Maxx Beans	13.0	49.6
Asgrow	AG4801	Apron Maxx RTA	12.9	46.6
Asgrow	AG4801	Apron Maxx RTA	12.8	47.8
Asgrow	AG4801	Apron Maxx RTA	12.8	47.8
Asgrow	AG4801	Aeris	13.1	43.8
Asgrow	AG4801	Aeris	12.9	46.2
Asgrow	AG4801	Aeris	13.1	55.4
Asgrow	AG4801	Avicta	12.9	45.9
Asgrow	AG4801	Avicta	12.5	44.5
Asgrow	AG4801	Avicta	13.3	53.5
Asgrow	AG4801	Check	13.4	52.4
Asgrow	AG4801	Check	12.9	54.0
Asgrow	AG4801	Check	13.0	44.8

Brand	Variety	Seed Treatment	Moisture	Yield
			(bu/A)	(bu/A)
Averages				
NK	S43B1	Cruiser Max Beans	13.0	47.8
Asgrow	AG4801	Apron Max RTA	12.8	47.4
Asgrow	AG4801	Aeris	13.0	48.5
Asgrow	AG4801	Avicta	12.9	48.0
Asgrow	AG4801	Check	13.1	50.4
	LSD (0.10)		0.4	6.7

Discussion: Under excellent growing conditions, with irrigation, there was no yield advantage to using seed treatments on this full season Maturity Group 5 soybean plot. Compare this study with other foliar fungicide plots in your area.

2007 EVALUATION OF TEMIK ON IRRIGATED SOYBEANS

Cooperators: Producer: John F. Davis and Tommy Hicks
Extension: Keith Balderson, Essex
Previous Crop(s): Corn
Tillage: Continuous No-till
Plot Size: Approximately .7 acre
Planting Date: April 29, 2007
Row Spacing: 15 inches
Crop Protection: Herbicide: glyphosate
Treatment Info: Temik in-furrow on treated plots
Harvest Date: October 2, 2007
Harvest Equipment: John Deere 9660

Treatment	Rep	Moisture	Yield
		(%)	(bu/A)
Control	1	10.7	72.0
Temik	1	11.0	73.1
Control	2	10.6	75.4
Temik	2	10.6	72.4
Control	3	10.8	73.6
Averages			
Control-3 reps.		10.7	73.7
Temik-2 reps		10.8	72.8
LSD (0.10)		0.3	3.5

Discussion:
Damage from nematodes to row crops in eastern Virginia has become more of a concern in recent years. This field has low levels of root knot nematodes, but the Temik did not increase yields. Nematode management consists of the use of resistant varieties, crop rotation, and nematicides. Soil testing for nematodes is available from Virginia Tech. The Virginia Soybean Board provided funding this year for a nematode survey. Results of that survey can be found elsewhere in the publication.

2007 EVALUAION OF TEMIK ON IRRIGATED DOUBLE CROP SOYBEANS

Cooperators: Producer: John F. Davis and Tommy Hicks
Extension: Keith Balderson, Essex
Previous Crop: Corn
Tillage: Continuous No-till
Plot Size: 0.342 acres
Variety: NK S39-A3
Planting Date: June 19, 2007
Row Spacing: 15 inches
Crop Protection: Temik in-furrow on treated plots, Glyphosate
Harvest Date: October 15, 2007
Harvest Equipment: John Deere 9660

Treatment	Rep	Moisture	Yield
		(%)	(bu/A)
Control	1	10.5	52.4
Temik	1	10.5	55.1
Control	2	10.5	51.7
Temik	2	10.5	57.5
Averages			
Control		10.5	52.1
Temik		10.5	56.3
LSD (0.10)		0.0	9.8

Discussion:
Damage from nematodes to row crops in eastern Virginia has become more of a concern in recent years. This field has low number of Soybean Cyst Nematodes (SCN), and the Temik tended to increase yields. Due to lack of replication, the difference was not significant however. Nematode management consists of the use of resistant varieties, crop rotation, and nematicides. Soil testing for nematodes is available from Virginia Tech. The Virginia Soybean Board provided funding this year for a nematode survey. Results of that survey can be found elsewhere in the publication.

2007 VIRGINIA SOYBEAN NEMATODE SURVEY

Cooperators: Principal Investigators: David Moore, Jon Eisenback, Pat Phipps, & David Holshouser

VCE Agents: Taylor Clarke, Mac Saphir, Watson Lawrence, Carl Stafford, Mike Parrish, Keith Balderson, Cindy Estienne, Paul Davis, Glenn Rountree, Regina Prunty, Matt Lewis, Michael Lachance, Glen Chappell, Sam Johnson, Wes Alexander, Rex Cotton, and Glenn Slade.

Funded through a grant from the Virginia Soybean Board, a nematode survey was conducted during the growing season of 2007. The purpose of this survey was to determine the type and amount of nematodes present in fields either showing reduced growth or suspected of having nematodes. Due to new varieties, trend toward continuous no-till, decrease in winter annual crops in cropping rotations, planting soybeans with single-gene resistance for cysts, and conversion from in-furrow insecticides to seed-treatments for pest problems, we felt that nematode types and numbers may have changed since the last survey conducted nearly 20 years ago. ANR Agents and consulting agribusiness from the soybean growing areas in the state were invited to participate with a goal of 100 samples for soybeans and 100 for corn. (Corn results will be written up in a separate publication). Fields were identified by the agent, the producer or consulting agribusiness during the growing season. Samples were then taken and sent to nematode lab at Virginia Tech (see results below).

Just over 70 samples were taken from the soybean growing areas of Virginia. Seventy (70%) of the samples were rated as either B (possible nematode problem) or C (nematodes are a problem; control options advisable). Forty-seven (47%) percent of the samples considered nematodes to be a problem and advised control options for those survey areas. Most common nematodes found in samples were (in descending order) Soybean Cyst (SCN), Stunt, Lesion, Stubby Root, Root Knot (RKN), Spiral, Lance and Ring. The majority of samples containing SCN came from south of the James, where the majority samples containing RKN came from north of the James. This is most likely due to soil, tillage, and crop rotation differences.

Traditional SCN is available in current varieties for Race 3 & 14. Resistance is also available in a few varieties for RKN. Further laboratory analysis will be conducted with these SCN samples to determine race. Fields in Essex and Chesapeake have been determined to have soybean cyst problems involving races 1 and 4, respectively. Further study will be done in these fields to make determination of race and also to evaluate nematode control/suppression strategies.

Additional sampling is being considered for 2008 in soybeans and corn, and to evaluate the effect of rotation. Additional research is being considered for 2008 and 2009 to determine control/suppression options for these identified fields. We appreciate the continued support of the Virginia Soybean Board.

2007 Survey of Virginia Fields Suspected of Having Nematode Problems*													
County	Sample No.	Lesion	Root knot	Cyst	Stubby root	Dagger	Stunt	Spiral	Lance	Ring	Sting	Pin	Rec.
Brunswick	D331	0	0	0	10	0	420	0	0	0	0	0	B
Brunswick	D337	0	0	0	0	10	670	150	0	0	0	0	B
Brunswick	D339	0	0	0	0	0	580	160	0	0	0	0	B
Brunswick	D341	0	0	0	10	0	420	0	0	0	0	0	B
Brunswick	D338	0	0	0	0	0	1170	160	0	0	0	0	C
Brunswick	D340	0	0	0	0	0	1570	0	0	0	0	0	C
Caroline	D179	0	0	0	30	0	190	0	40	0	0	0	A
Caroline	D258	90	0	0	10	0	0	10	1510	0	0	0	C
Caroline	D259	0	1820	0	0	0	0	0	480	0	0	0	C
Chesapeake	D230	0	0	174	0	0	20	170	0	0	0	0	C
Chesapeake	D231	60	0	550	60	0	90	1880	0	0	0	0	C
Chesapeake	D263	0	40	4470	0	0	30	290	140	0	0	0	C
Chesapeake	D264	10	0	340	0	0	10	800	0	0	0	0	C
Chesapeake	D265	0	0	410	0	0	0	60	0	0	0	0	C
Chesapeake	D266	40	0	140	0	0	20	340	20	0	0	0	C
Chesapeake	D267	0	0	690	0	0	0	480	0	0	0	0	C
Chesapeake	D268	120	0	110	0	0	0	210	0	0	0	0	C
Chesapeake	D311	20	0	300	0	0	50	550	0	0	0	0	C
Chesapeake	D336	0	0	80	0	20	30	500	0	0	0	0	C
Culpeper	D203	30	0	0	0	0	0	10	0	0	0	0	A
Dinwiddie	D376-383	0	3	0	0	4	154	0	0	0	0	0	A
Dinwiddie	D213-220	28	5	0	3	0	836	23	14	0	0	0	B
Dinwiddie	D343	0	0	0	0	0	840	10	0	0	0	0	B
Dinwiddie	D370	0	0	10	0	0	310	0	30	0	0	0	B
Dinwiddie	D382	0	0	0	0	0	430	0	0	0	0	0	B
Dinwiddie	D229	350	0	0	0	10	260	310	30	0	0	0	C
Dinwiddie	D344	0	0	60	10	0	570	10	40	0	0	0	C
Dinwiddie	D369	20	0	430	0	0	310	0	0	0	0	0	C

2007 Survey of Virginia Fields Suspected of Having Nematode Problems*													
County	Sample No.	Lesion	Root knot	Cyst	Stubby root	Dagger	Stunt	Spiral	Lance	Ring	Sting	Pin	Rec.
Essex	D197	10	0	0	0	10	100	630	140	0	0	0	A
Essex	D238	70	10	0	0	0	150	910	60	0	0	0	A
Essex	D239	130	0	0	0	0	480	400	70	0	0	0	B
Essex	D193	0	0	2970	0	0	0	140	60	0	0	0	C
Essex	D194	40	0	2820	0	0	0	150	20	0	0	0	C
Essex	D195	0	0	350	0	0	40	300	140	0	0	0	C
Essex	D196	10	0	220	20	20	0	300	140	0	0	0	C
Essex	D233	20	0	1190	60	0	0	110	60	0	0	0	C
Essex	D234	0	0	1340	10	0	10	120	50	0	0	0	C
Essex	D240	0	30	30	10	30	120	330	80	0	0	0	C
Essex	D298	20	3050	410	0	0	0	330	190	0	0	0	C
Gloucester	D222	520	0	20	30	30	140	450	50	0	0	0	C
Gloucester	D284	270	3420	0	200	0	40	680	30	0	0	0	C
Gloucester	D285	880	40	780	50	0	170	30	50	0	0	0	C
Greensville	D367	0	10	0	0	0	50	0	0	0	0	0	A
Greensville	D368	0	0	0	0	0	0	0	0	0	0	0	A
Greensville	D366	30	0	20	0	0	20	60	0	0	0	0	C
Henrico	D374	0	0	0	0	0	20	20	0	0	0	0	A
Isle of Wight	D080	10	0	0	140	60	30	640	0	0	0	0	B
Isle of Wight	D079	10	20	100	140	20	20	430	0	0	0	0	C
King & Queen	D372	0	0	0	0	0	40	780	0	0	0	0	A
King & Queen	D373	0	0	0	0	0	0	0	0	10	0	0	A
King & Queen	D371	10	0	30	0	0	170	10	0	0	0	0	B
King George	D291	400	0	0	0	0	190	2560	0	0	0	60	C
Lancaster	D295	0	0	0	0	0	140	2070	80	0	0	0	B
Lancaster	D296	60	180	0	70	0	170	400	20	0	0	0	C
Lancaster	D297	0	0	110	0	0	0	220	90	0	0	0	C
Mathews	D269	0	20	0	0	0	30	0	0	0	0	0	A
Middlesex	D270	30	120	0	260	0	400	10	320	0	0	0	B
Middlesex	D271	0	0	0	110	0	30	20	120	20	0	0	B

2007 Survey of Virginia Fields Suspected of Having Nematode Problems*													
County	Sample No.	Lesion	Root knot	Cyst	Stubby root	Dagger	Stunt	Spiral	Lance	Ring	Sting	Pin	Rec.
Middlesex	D306	20	1730	0	90	0	210	40	20	0	0	0	C
Middlesex	D307	40	1790	0	10	0	0	290	50	10	0	0	C
Nelson	D375	0	0	0	0	0	0	0	0	0	0	0	A
Northumberland	D293	0	0	0	0	0	160	30	120	0	0	0	A
Northumberland	D292	0	0	30	10	0	430	40	0	0	0	0	C
Northumberland	D294	1020	0	0	0	0	180	850	280	0	0	0	C
Prince George	D205-212	102	0	1	23	0	157	302	0	0	0	0	B
Prince George	D345-354	37	0	1	0	0	22	27	8	0	0	4	A
Richmond	D237	30	0	0	0	0	70	580	90	0	0	0	A
Southampton	D249	0	0	0	0	0	0	420	10	0	0	0	A
Southampton	D251	0	0	0	290	0	210	0	0	0	0	0	B
Southampton	D255	40	90	0	120	0	370	0	0	0	0	0	B
Southampton	D250	0	0	0	280	0	0	10	0	0	40	0	C
Southampton	D252	40	90	0	270	0	1110	0	0	0	0	0	C
Southampton	D253	100	20	0	500	0	1010	0	0	10	0	0	C
Southampton	D254	70	20	0	340	0	1890	0	0	10	0	0	C
Suffolk	D365	0	30	0	20	0	100	320	0	0	0	0	A
Surry	D118	0	0	0	110	0	320	0	0	0	0	0	B
Surry	D117	10	60	0	80	10	0	0	0	0	0	0	C
Average		58	119	172	34	2	243	226	45	1	0	1	C

* A/green = nematodes are not likely to cause damage

B/yellow = borderline populations in which crop damage may occur if other factors stress the crop

C/red = populations are likely to cause crop damage and a significant yield loss.

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